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February 20, 1997

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Federal Communications Commission
Office of Secretary

Mr. William F. Caton
Secretary
Federal Communications Commission
1919 M Street, NW Room 222
Washington, D.C. 20554

EX PARTE: Federal-State Joint Board on Universal Service (CC Docket No. 96-45)

Dear Mr. Caton:

Today representatives of GTE Service Corp., Professor Paul Milgrom of Stanford University, and Barbara Cherry of Ameritech met with: state staff members Barry Payne, Brian Roberts, and Tom Wilson; and FCC staff members C. Anthony Bush, Doron Fertig, David Krech, Evan Kwerel, Greg Rossten, Bill Sharkey, and Tom Spavins to discuss to results of Professor Milgrom's analysis of whether there are cost complementarities that must be considered when designing an auction proposal for universal service support in the captioned docket. GTE used the attached document in its presentation. In accordance with Section 1.1206(a)(1) of the Commission's Rules, two copies of this notice are being filed with the Secretary of the FCC.

Please let me know if you have any questions.

Sincerely,

Charon J. Harris

Attachment
cc: A. Bush
B. Cherry
D. Fertig
D. Krech
E. Kwerel
B. Payne
B. Roberts
G. Rossten
W. Sharkey
T. Spavins
T. Wilson

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Auction Proposal

for

universal service

GTE

Why an Auction?

- Market solution to setting subsidy levels
- Ensures adequacy of support
- Avoids unnecessarily high subsidies
- Identifies efficient ("low cost") suppliers
  - » Bids reflect *bidders' own* cost expectations
  - » Bids reflect follow-on services, too
- Replaces cost-of-service regulation

Auction Design Objectives

- Promote competition "in the market" where feasible: innovation & service quality
- Promote efficiency of supply
  - » Low costs & valuable vertical services
- Keep subsidies low

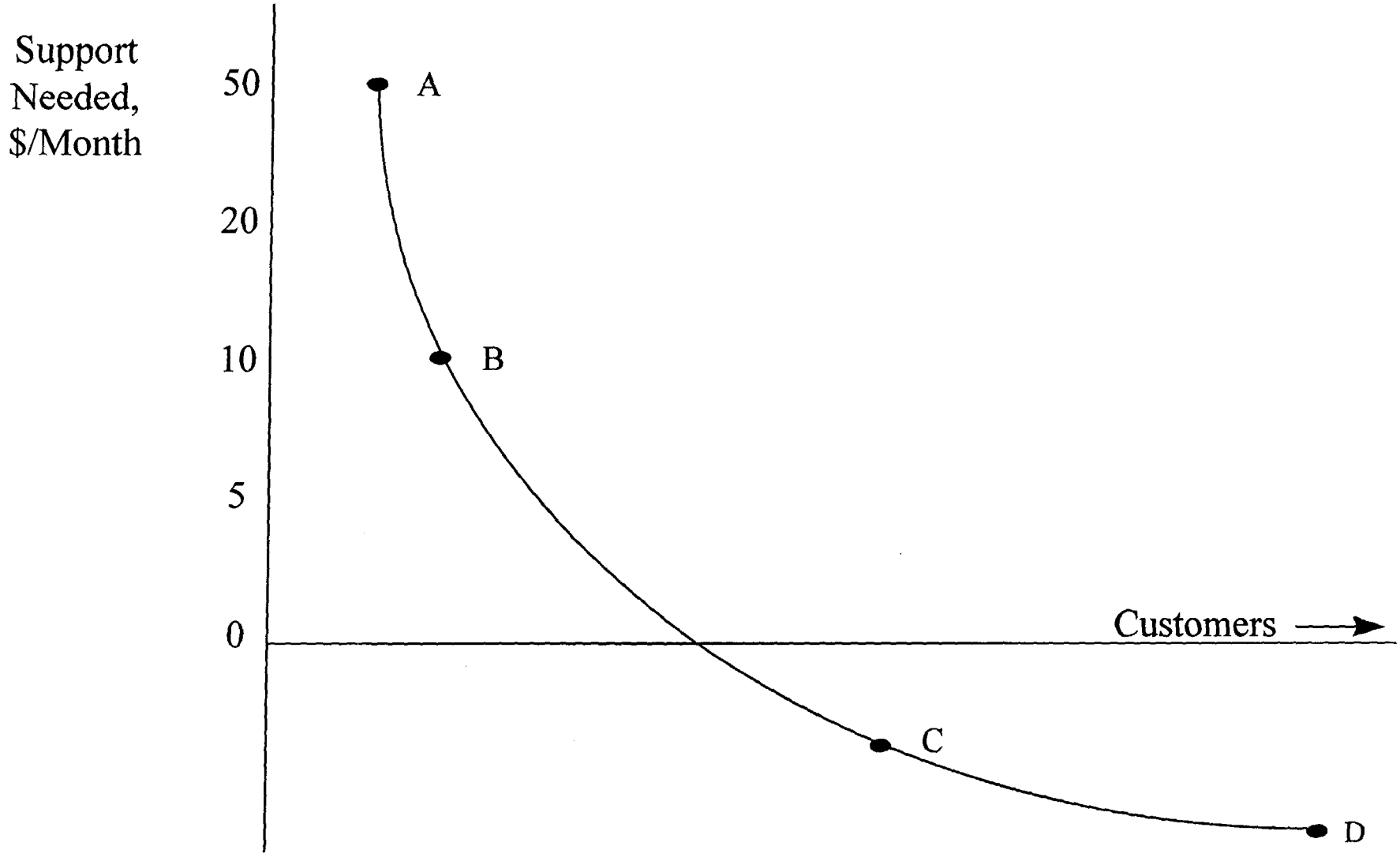
- Avoid collusion
- Simplify administration and bidding
- Account for changing environment

Context for the Auction

Auctions amplify the importance of these:

- Small geographic areas (CBGs)
- Obligation to serve
- Possibility of exit
- Subsidies on a per-subscriber basis
- Integrated regulation of unbundling & resale obligations

Ordering of Customers within a Service Area, By Support Need



Attachment 3

Auction Elements

- Nomination of Areas
- Verification of Bidder Qualifications
- Sealed Bid Auction with Possibility of Multiple Winners
- Post-auction Implementation

Nomination

- Twice yearly window for nomination by "el tel"
- Entrant may nominate multiple CBGs
- Auction only areas nominated

Verification

- "El tel" designation
- Require commitment to serve
  - » service obligations established by state commission, within federal guidelines
- Verify bidder capabilities

Auction Rules

- Single round sealed bid auction
- Separate bids for each CBG
- Maximum bid based on initial subsidy
  - » multiple of cost estimated by model, or
  - » cost assigned to CBG by ILEC
- Multiple winners possible
  - » E.g. all bidders within 15% of low bid declared winners
- Support at highest acceptable bid
- Bids may be withdrawn subject to penalty

Post-Auction Implementation

- Reasonable transition period when market structure changes
- Obligations are transferable to qualified el tels
- Areas may be rebid at any time if no change in market structure
- Areas may be rebid after three years after an auction that changes the market structure
- Subsidies may be indexed in similar fashion to "price caps"

An Index of Cost Complementarity

The index is the *extra cost incurred, in percentage terms, when areas* A *and* B *are served separately by two firms with identical incremental costs, rather than being served together by just one firm.*

(1)	Incremental Cost of Serving Area A:	$C(X \cup A) - C(X)$
(2)	" B:	$C(X \cup B) - C(X)$
(3)	" A and B together:	$C(X \cup A \cup B) - C(X)$
(4)	**Index**(X,A,B):	$[(1)+(2)-(3)]/(3)$

The index is

- the potential cost increase if COLR obligations are not combined efficiently
- relevant for both total welfare evaluations and bid strategy evaluations
- dependent on the underlying core service area X

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: U S West
Stevens County, Washington

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_1	$I_1 \cup I_2$	0.0%	0.0%
	$J_1 \cup J_2$	0.0%	0.0%
$X_1 \cup I_1 \cup I_2$	$J_1 \cup J_2$	0.0%	0.0%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: U S West
Stevens County, Washington

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_2	$I_1 \cup I_2$	0.0%	0.0%
	$J_1 \cup J_2$	0.0%	0.0%
$X_2 \cup I_1 \cup I_2$	$J_1 \cup J_2$	0.0%	0.0%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: GTE
Chelan County, Washington

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_1	$I_1 \cup I_2$	1.62%	1.07%
	$J_1 \cup J_2$	-5.33%	-3.99%
	$K_1 \cup K_2$	3.89%	2.82%
$X_1 \cup I_1 \cup I_2$	$J_1 \cup J_2$	0.79%	0.49%
	$K_1 \cup K_2$	1.13%	0.81%
$X_1 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	-0.02%	-0.02%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: GTE
Chelan County, Washington

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_2	$I_1 \cup I_2$	1.4%	0.9%
	$J_1 \cup J_2$	3.1%	2.0%
	$K_1 \cup K_2$	3.9%	2.8%
$X_2 \cup I_1 \cup I_2$	$J_1 \cup J_2$	0.8%	0.5%
	$K_1 \cup K_2$	1.1%	0.8%
$X_2 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	0.0%	0.0%

Source: BCM2

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BCM2 Cost Synergies: U S West Seattle, Washington

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_1	$I_1 \cup I_2$	3.6%	2.6%
	$J_1 \cup J_2$	8.1%	6.3%
	$K_1 \cup K_2$	8.0%	6.2%
$X_1 \cup I_1 \cup I_2$	$J_1 \cup J_2$	8.1%	6.3%
	$K_1 \cup K_2$	8.0%	6.2%
$X_1 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	2.2%	1.7%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: U S West
Seattle, Washington

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_2	$I_1 \cup I_2$	3.3%	2.4%
	$J_1 \cup J_2$	7.2%	5.5%
	$K_1 \cup K_2$	7.7%	5.9%
$X_2 \cup I_1 \cup I_2$	$J_1 \cup J_2$	7.2%	5.5%
	$K_1 \cup K_2$	7.7%	5.9%
$X_2 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	2.2%	1.7%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: GTE Plano, Texas

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_1	$I_1 \cup I_2$	4.2%	2.7%
	$J_1 \cup J_2$	8.3%	5.9%
	$K_1 \cup K_2$	7.2%	5.4%
$X_1 \cup I_1 \cup I_2$	$J_1 \cup J_2$	8.3%	5.9%
	$K_1 \cup K_2$	7.2%	5.4%
$X_1 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	0.4%	0.3%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: GTE Plano, Texas

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_2	$I_1 \cup I_2$	3.9%	2.5%
	$J_1 \cup J_2$	-8.3%	-6.7%
	$K_1 \cup K_2$	2.6%	1.9%
$X_2 \cup I_1 \cup I_2$	$J_1 \cup J_2$	2.8%	1.9%
	$K_1 \cup K_2$	2.6%	1.9%
$X_2 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	0.7%	0.5%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: GTE Durham, North Carolina

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_1	$I_1 \cup I_2$	2.3%	1.8%
	$J_1 \cup J_2$	4.5%	3.2%
	$K_1 \cup K_2$	3.2%	2.0%
$X_1 \cup I_1 \cup I_2$	$J_1 \cup J_2$	4.5%	3.2%
	$K_1 \cup K_2$	3.0%	2.0%
$X_1 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	0.0%	0.0%

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

BCM2 Cost Synergies: GTE Durham, North Carolina

Core	Incremental CBGs	Index of Investment	Index of Monthly Cost
X_2	$I_1 \cup I_2$	2.3%	1.8%
	$J_1 \cup J_2$	3.6%	2.6%
	$K_1 \cup K_2$	2.8%	1.8%
$X_2 \cup I_1 \cup I_2$	$J_1 \cup J_2$	-5.4%	-4.6%
	$K_1 \cup K_2$	-6.7%	-5.0%
$X_2 \cup I_1 \cup I_2 \cup J_1 \cup J_2$	$K_1 \cup K_2$	0.0%	0.0%

Source: BCM2

Prepared by David Salant and John Holzwarth
For Paul Milgrom

Cost of Service for Selected CBGs in Washington - GTE

CBGs Served	Penetration Rate	Monthly Cost Per Loop	Number of Loops Served	Average Loop Length (Feet)	Distribution Investment Per Loop	Feeder Investment Per Loop	Switching Investment Per Loop	CBGs Per Wire Center
Randomly Selected CBGs								
145	100%	$39.14	77,147	20,791	$977	$402	$178	5.4
145	65%	$50.65	50,146	20,791	$1,436	$497	$210	5.4
145	50%	$59.73	38,574	20,791	$1,821	$562	$223	5.4
100	100%	$41.48	51,926	21,592	$1,023	$441	$208	3.8
100	65%	$54.06	33,752	21,592	$1,508	$544	$259	3.8
100	50%	$63.79	25,963	21,592	$1,911	$626	$270	3.8
50	100%	$45.81	22,431	21,150	$1,091	$477	$316	2.4
50	65%	$60.55	14,580	21,150	$1,598	$597	$433	2.4
50	50%	$72.49	11,216	21,150	$2,030	$678	$522	2.4
Systematically Selected CBGs Close to Wire Center								
145	100%	$39.14	77,147	20,791	$977	$402	$178	5.4
145	65%	$50.65	50,146	20,791	$1,436	$497	$210	5.4
145	50%	$59.73	38,574	20,791	$1,821	$562	$223	5.4
100	100%	$32.29	58,542	12,801	$732	$289	$185	4.5
100	65%	$41.08	38,053	12,801	$1,073	$346	$234	4.5
100	50%	$48.10	29,271	12,801	$1,356	$374	$278	4.5
50	100%	$25.76	31,063	6,735	$556	$121	$198	4.2
50	65%	$32.63	20,191	6,735	$829	$144	$250	4.2
50	50%	$38.55	15,531	6,735	$1,058	$164	$301	4.2

Source: BCM2

Prepared by David Salant and John Holzwarth
For Paul Milgrom

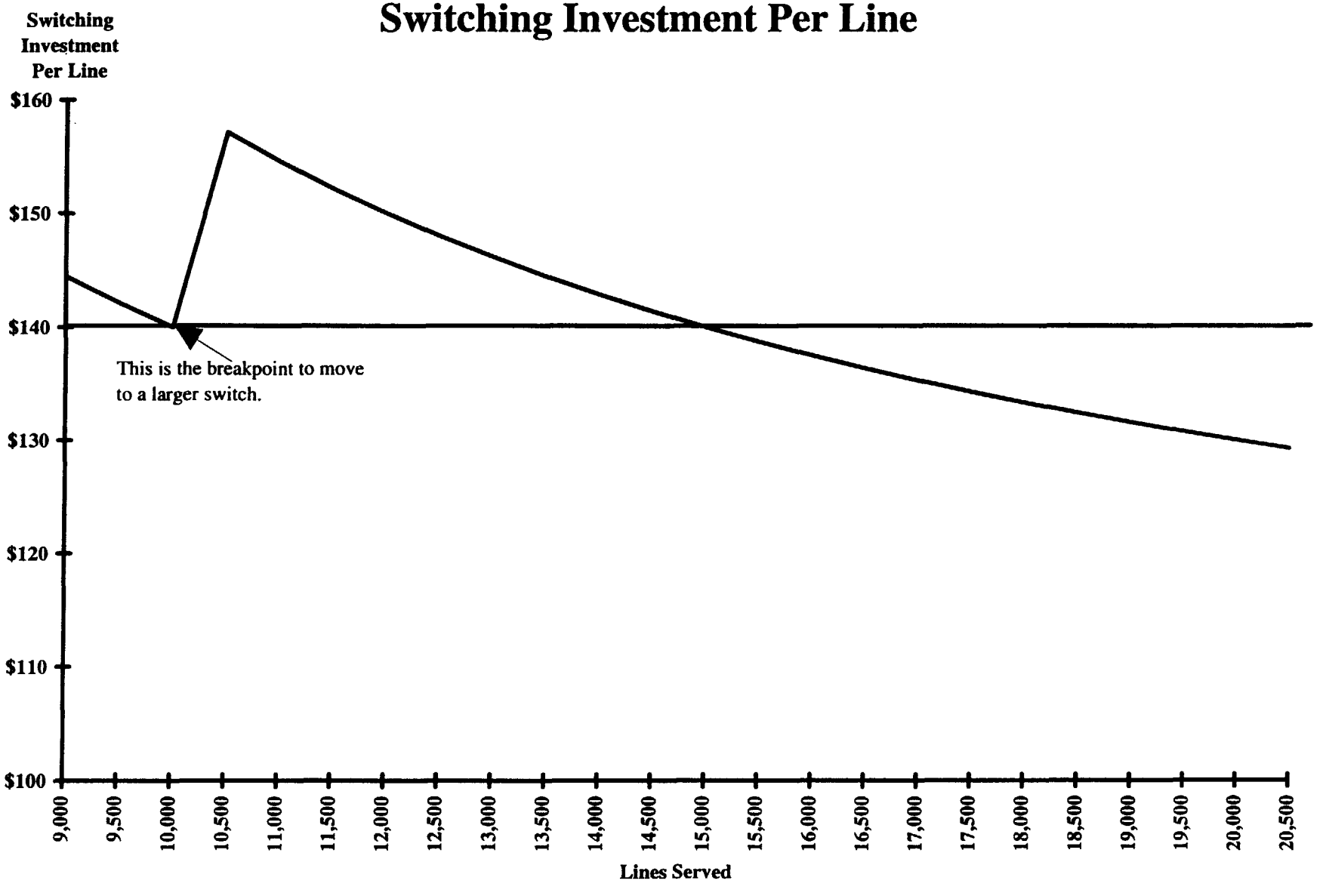
Cost of Service for Selected CBGs in Washington - U S West

CBGs Served	Penetration Rate	Monthly Cost Per Loop	Number of Loops Served	Average Loop Length (Feet)	Distribution Investment Per Loop	Feeder Investment Per Loop	Switching Investment Per Loop	CBGs Per Wire Center
Randomly Selected CBGs								
575	100%	$27.13	404,197	14,567	$550	$291	$107	28.8
575	65%	$33.38	262,728	14,567	$814	$340	$114	28.8
575	50%	$38.80	202,098	14,567	$1,048	$378	$119	28.8
320	100%	$27.16	221,753	13,515	$543	$288	$118	16.0
320	65%	$33.49	144,140	13,515	$803	$339	$131	16.0
320	50%	$38.99	110,877	13,515	$1,036	$380	$138	16.0
100	100%	$27.66	73,538	13,696	$506	$314	$150	5.9
100	65%	$34.29	47,800	13,696	$748	$380	$181	5.9
100	50%	$40.21	36,769	13,696	$970	$430	$210	5.9
Systematically Selected CBGs Close to Wire Center								
575	100%	$27.13	404,197	14,567	$550	$291	$107	28.8
575	65%	$33.38	262,728	14,567	$814	$340	$114	28.8
575	50%	$38.80	202,098	14,567	$1,048	$378	$119	28.8
320	100%	$23.54	234,906	8,385	$469	$182	$116	16.8
320	65%	$28.90	152,689	8,385	$703	$210	$127	16.8
320	50%	$33.57	117,453	8,385	$909	$233	$138	16.8
100	100%	$21.09	72,111	4,458	$429	$52	$159	5.6
100	65%	$26.05	46,872	4,458	$643	$57	$192	5.6
100	50%	$30.46	36,056	4,458	$833	$65	$220	5.6

Source: BCM2

Prepared by David Salant And John Holzwarth
For Paul Milgrom

Switching Investment Per Line



Note: Figures used in this chart are approximate.
Source: BCM2